

# Fecal Microbiota Transplantation (FMT) for Clostridium Difficile Infection

## FMT FAQs

- [What is FMT?](#)

FMT stands for “Fecal Microbiota Transplantation,” which is also commonly known as ‘stool transplantation’ or ‘fecal transplant.’ The main purpose of FMT is to transfer gut organisms from a healthy donor to a patient.

- [What is the microbiota?](#)

“Microbiota” is the collective term coined to describe the community of living organisms (microbes) that literally share our body spaces (such as colon, skin, mouth etc.) It has been reported that numerically, the human body actually contains 10 times more microbial cells than human cells.

- [Are all microbes harmful?](#)

Not all microbes are harmful. Microbes that cause disease are called pathogens. Microbes that do not cause disease are called commensals. Many commensals live within and on our body, providing mutual benefits to one another. Not only are they not harmful, they can perform tasks that human bodies cannot, for example, breaking down complex carbohydrates (sugars) that we can’t digest, training our immune systems, and modulating inflammation to keep us healthy.

- [What are Probiotics and Bacteriotherapy?](#)

Bacteriotherapy is the term used for the intentional use of bacteria or their products to treat an illness. Probiotics and FMT are examples of bacteriotherapy. Probiotics refers to healthy or ‘good’ microbes (usually bacteria and/or yeast) administered to confer a health benefit. Examples include the use of probiotics to decrease antibiotic-related diarrhea, or FMT for recurrent *C. difficile* infection. Whereas probiotic products include selected species of beneficial organisms (usually one or just a few), FMT includes the entire stool population of organisms (after screening for the known dangerous or harmful ones).

- [Who may be a candidate for FMT?](#)

Currently, FMT is used to treat patients with recurrent *C. difficile* infection (CDI). This infection is often a consequence of antibiotic use, which can disrupt a patient’s microbiome, allowing *C. diff* to grow unchecked. Clinical studies using FMT have demonstrated nearly 90% cure rates for recurrent CDI as compared to 30% using standard antibiotic treatment.

- [How does FMT cure recurrent \*C. difficile\* infection?](#)

FMT works by restoring the natural balance of the intestinal bacterial community that has been disrupted by antibiotics. FMT reintroduces a balanced and protective microbiota that suppresses *C. diff*, and rebuilds a stable microbial environment in the large intestine.

- [Is FMT FDA-approved?](#)

As of late 2015, the Food and Drug administration (FDA) considers FMT appropriate in select patients and only for recurrent *C. diff*. It is considered an experimental treatment for all other indications. Use of FMT for any other illness or indication should only be done under the direction of a research program.

- [What are the risks of FMT?](#)

FMT is a new technique. Thus far, very few complications have been described, although minor symptoms such as abdominal pain, cramps, and changes in bowels have been reported. Longer term, there are concerns about stimulating autoimmune diseases, and there may be other, currently unknown

risks. Given this, FMT should only be undertaken after the patient and their doctor carefully consider the risks and benefits.

- **How is FMT delivered to the patient?**

FMT can be performed by different methods. The prepared specimen can be delivered using a feeding tube passed through the nose into the stomach, or by using an endoscope through the mouth that is advanced into the small intestine. More often, it is delivered using a colonoscope, a tube introduced into the large intestine via the rectum, or via a rectal enema. Capsules of FMT for oral delivery are being currently evaluated and may be available soon.

- **Where does the FMT material come from and how much does it cost?**

Until recently, most fecal specimens were obtained individually from screened healthy relatives or friends of the patient who needed the transplant. That remains an option, but is fairly labor intensive and can be costly, because the donor must be individually screened for many infections prior to safely using for a transplant. This can cost >\$1000. More recently, however, frozen specimens obtained from pre-screened healthy donors have become available from national stool banks. These banks can screen for even more pathogens (usually >20) than is routinely done individually, and spread the cost out over multiple patients. The cost for oral capsules is still undetermined, but will likely be higher. Insurance coverage for FMT is still being worked out; it is not currently recognized by all payers, and the cost of the test used to administer the FMT (i.e. the colonoscopy) is also another cost.

- **Can I be a donor?**

If you are a healthy individual without any major medical conditions, you might be able to be a donor. You will be interviewed for risk factors. Specific blood and stool tests will be needed in order to ensure no potential transmittable infectious agents will be transplanted to the recipient. If you pass all the screening tests, you can be accepted as a donor. Details of the screening process can be obtained from individual donor sites.

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